

ALLOCATION PROBLEMS OF SECOND AND THIRD CHANNEL
FM RADIO STATIONS (LPFM) IN THE VICTORIA,
TEXAS, RADIO MARKET

SUBMITTED AS ADDENDUM TO REPLY COMMENTS
IN RM-9242
BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION

1. The exhibit was done by hand held calculator and the curves of §73.333 of 47 CFR Ch. I (10-1-97 Edition) The actual calculations took over three weeks of work to devise, utilize mathematical models, and finally utilize. All figures are considered to be real and to the best of the ability of commentator John J. (Joe) Tibiletti accurate. No higher tool was used than a ruler, hand held calculator, plastic compass, and french curve with a pencil. Should any tardiness be experienced in their reception in same docket commentator wishes to beg pardon of proper authorities for reason as stated in this paragraph. The other part of the reply comment was mailed priority mail last week this section was not available for mailing due to the holiday weekend. All efforts are being made to prepare this document for proper timely reception by the Commission.

2. Some comments first on the order of presentation and its contents as to how and wherefore is included. The RM-9242 contained very sketchy data as to coverage from various configurations of tower and power -- in miles, while the Commission's curves are now and for some five or more years have been in metric with meters and kilometers. It was necessary to re-cast these in usable form in order to utilize the curves of FM wave propagation of §73.333 and then tabulated. Then several stations in the market most familiar to commentator were selected as "victim stations," that is to say they were chosen as possible stations to suffer inter-

No. of Copies rec'd
List A B C D E

0+4

MMB

ference from the so-called proposed low power stations. Then several of of power level stations proposed by RM-9242 were chosen as typical and most summarily of nuisance value to these existing stations. Then two available locations in the city of Victoria were chosen of the type and city location that most likely a new low power applicant would choose.

3. A table is enclosed for typical low power " FM stations" and their requisite contours in decibel units were presented. The contours are defined in §74.1204 Protection of FM broadcast stations and FM translators. A copy of this section is enclosed herein. Then using the 60 dbu contours of the two stations (victims) a distance required from their transmitters is presented for both third and second adjacent channels.

4 The two stations selected were KVLIT (class A 6kilowatt directional) with a transmitter at the south east city limits of the city of Victoria, Texas, and the station of commentator located some three miles north-west of the south-west city limits of the city. KTXN (class C1 100 kilowatt) is located on commentator's property.

5. Two potential sites for low power FM stations were selected. One is the site of Walmart (herein Walmart) and the Texas Department of Public Safety -- an actual tower in use. The other more in the center of the city is a building occupied by Norwest Banks (herein Norwest) with a height comorable to use by a 100 foot station (30 meters).

6. Facilities for the low power stations were chosen as follows. Assuming that applicant-operator to be wished to maximize coverage,


to serve the city of Victoria, Texas, the following configurations were chosen:

WALMART 3 kilowatts and 328 feet (100 meters)

NORWEST 1 kilowatt and 150 feet (46 meters)
and alternatively for KTXN considerations only
.1 kilowatt and 100 feet (30 meters).

7. The two victim stations KVLTV and KTXN are both locally owned by owner-operators who are un-affiliated with any other station and would most be affected by the operations of low power FM stations on the second and third adjacent channels.

8. An index is provided herein and comments and conclusions on each exhibit are added where there is a need.



John J. (Joe) Tibiletti

Victoria, Texas
May 23, 1998

Table One

Typical Low Power stations and classes' facilities as proposed in RM-9242 and comments as to compliance to §74.1204 (see enclosed). Station KTXN has an average distance of 28.5 miles (45 kilometers) to its 60 dbu contour, while KVLTV has an average distance of 16.4 miles or (26 kilometers) to its requisite 60 dbu contour.

Per RM-9242 (Proponent Skinner)
classification LPFM stations

Watts	100 dbu	80 dbu	70 dbu	60 dbu	54 dbu	40 dbu	34 dbu	requisite distance from station to achieve §74.1204	
Height	100 mv/m	10 mv/m	3.16 mv/m	1 mv/m	.5 mv/m	.1 mv/m	.05 mv/m*	KVLTV	KTXN
	km (mi)	km (mi)	km (mi)	km (mi)	km (mi)	km (mi)	km (mi)		
LPFM-1 classification per petition of RM-9242								2nd adjacent channel 60 dbu + 80 dbu 3rd adjacent channel 60 dbu + 100dbu	
50	--	1.5	2.7	4.75	6.25	14.1	21.4	2d 27.9(17.3)	46.5(28.8)
100' (30M)	--	(.93)	(1.67)	(2.95)	(3.88)	(8.76)	(13.3)	3d 26 (16.1)	45 (28.5)
100	.088	1.8	3.2	6	10.4	18.75	25.7	2d 27.8(17.3)	46.8(29.0)
100' (30M)	(.054)	(1.1)	(1.98)	(3.72)	(6.46)	(11.65)	(15.97)	3d 26.1(16.2)	45.1(28.0)
1000	1.15	3.8	7.0	12.9	16.25	45	52	2d 29.8(18.5)	48.8(30.3)
150' (52m)	(.71)	(2.4)	(4.4)	(8.0)	(10.1)	(28.0)	(32.3)	3d 27.2(16.9)	46.2(28.7)
1000	1.7	5.8	10	18	45	60	62	2d 31.8(19.8)	50.8(31.6)
328' (100M)	(1.1)	(3.6)	(6.2)	(11.2)	(28.0)	(37.3)	(38.5)	3d 27.7(17.2)	46.7(29.0)
3000	2.17	7.6	13.6	24.3	36	76	78	2d 33.6(21.0)	52.6(32.7)
328' (100M)	(1.3)	(4.7)	(8.5)	(15.1)	(22.4)	(47.2)	(48.5)	3d 28.2(17.5)	47.2(29.3)
LPFM-2 classification									
1	--	--	.88	1.8	2.1	7.7	8	2d 26 (16.4)	45 (28.5)
32' (10M)	--	--	(.55)	(1.11)	(1.3)	(4.8)	(5.0)	3d 26 (16.4)	45 (28.5)
10	--	.88	1.8	3.2	6.1	12	14.3	2d 26.9(16.7)	45.9(28.5)
32' (10M)	--	(.55)	(.93)	(2.0)	(3.8)	(7.5)	(8.9)	3d 26 (16.2)	45.9(28.5)

Table One (continued)

LPFM-2 Watts	100 dbu	80 dbu	70 dbu	50 dbu	54 dbu	40 dbu	34 dbu	60 dbu clearance	
Height	100 mv/m	10 mv/m	3.16 mv/m	1mv/m	.5 mv/m	.1 mv/m	.05 mv/m	KVLT	KTXN
	km(mi)	km(mi)	km(mi)	km(mi)	km(mi)	km(mi)	km(mi)		
LPFM-2 classification (continued)									
								2nd adjacent channel 60 dbu + 80 dbu	
								3rd adjacent channel 50 dbu + 100 dbu	
20	--	1.2	2.1	3.8	7.3	12.9	17	2d 26	(16.4)46(28.6)
100' (30M)	--	(.75)	(1.31)	(2.2)	(4.5)	(8.0)	(10.6)	3d 26	(28.5)45(28.5)
30	--	1.7	3	5.25	8.1	17	21.4	2d 27.7	(17.2)46.7(29)
150' (46M)	--	(1.1)	(1.9)	(3.27)	(5.0)	(10.6)	(13.3)	3d 26	(16.4)45 (28.5)
50	--	2	3.4	6	10.5	20	24.8	2d 28	(17.4)47 (29.2)
150' (46M)	--	(1.24)	(2.1)	(3.73)	(6.53)	(12.4)	(15.4)	3d 26	(16.4)45 (28.5)

LPFM-3 classification

1 watt at 32' (10M)
 10 watts at 32' (10M)
 20 watts at 32' (10M)

A cursory glance in the 100 dbu and 80 dbu columns will reveal whether there is a radiation of these levels, and if so, the distance necessary to clear the 60 dbu existing station contour.

All data the same as class LPFM-2, save as these facilities are for a limited time of operations only.

The curves from which these distances were calculated reflect service at 30 feet.

The 34 dbu value (50,50) is included as a point of reference only, for previously applicants were required to show this contour in their applications. It is considered in literature prior to 1970 as sufficient for rural reception.

The two last columns referring to distance between the LPFM various class stations and the transmitter sites of KVLT and KTXN indicate the actual distance that is required to clear the 60 dbu contours of these stations. For LPFM station operating on the first adjacent channel the proposed station must not overlap the 60 dbu existing 60 dbu contour with more than 54 dbu. For the second adjacent channel the contour maximum at the 60 dbu existing contour is 80 dbu, while the 100 dbu of the proposed station can meet, but not exceed the location of the existing 60 dbu contour. These are §74.1204 protection of FM broadcasting stations and the FM translators.

The above section relative to this §74.1204 is read as follows: for a location of a second adjacent channel must be located 26 kilometers from KVLT transmitter location.

by the Commission to the station licensee that such interference is being caused, the operation of the FM translator or FM booster station shall be suspended within three minutes and shall not be resumed until the interference has been eliminated or it can be demonstrated that the interference is not due to spurious emissions by the FM translator or FM booster station; provided, however, that short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures.

[55 FR 50693, Dec. 10, 1990, as amended at 60 FR 55484, Nov. 1, 1995]

§74.1204 Protection of FM broadcast stations and FM translators.

(a) An application for an FM translator station will not be accepted for filing if the proposed operation would involve overlap of predicted field strength contours with any other authorized station, including commercial and noncommercial educational FM broadcast stations, FM translators and Class D (secondary) noncommercial educational FM stations, as set forth below:

(1) Commercial Class B FM Stations (Protected Contour: 0.5 mV/m)

Frequency separation	Interference contour of proposed translator station	Protected contour of commercial Class B station
Co-channel	0.05 mV/m (34 dBu)	0.5 mV/m (54 dBu)
200 kHz	0.25 mV/m (48 dBu)	0.5 mV/m (54 dBu)
400 kHz	5.00 mV/m (74 dBu)	0.5 mV/m (54 dBu)
600 kHz	50.0 mV/m (94 dBu)	0.5 mV/m (54 dBu)

(2) Commercial Class B1 FM Stations (Protected Contour: 0.7 mV/m)

Frequency separation	Interference contour of proposed translator station	Protected contour of commercial Class B1 station
Co-channel	0.07 mV/m (37 dBu)	0.7 mV/m (57 dBu)
200 kHz	0.35 mV/m (51 dBu)	0.7 mV/m (57 dBu)
400 kHz	7.00 mV/m (77 dBu)	0.7 mV/m (57 dBu)
600 kHz	70.0 mV/m (97 dBu)	0.7 mV/m (57 dBu)

(3) All Other Classes of FM Stations (Protected Contour: 1 mV/m)

Frequency separation	Interference contour of proposed translator station	Protected contour of any other station
Co-channel	0.1 mV/m (40 dBu)	1 mV/m (60 dBu)
200 kHz	0.5 mV/m (54 dBu)	1 mV/m (60 dBu)
400 kHz	10 mV/m (80 dBu)	1 mV/m (60 dBu)
600 kHz	100 mV/m (100 dBu)	1 mV/m (60 dBu)

(b) The following standards must be used to compute the distances to the pertinent contours:

(1) The distances to the protected contours are computed using Figure 1 of §73.333 [F(50,50) curves] of this chapter.

(2) The distances to the interference contours are computed using Figure 1a of §73.333 [F(50,10) curves] of this chapter. In the event that the distance to the contour is below 16 kilometers (approximately 10 miles), and therefore not covered by Figure 1a, curves in Figure 1 must be used.

(3) The effective radiated power (ERP) to be used is the maximum ERP of the main radiated lobe in the pertinent azimuthal direction. If the transmitting antenna is not horizontally polarized only, either the vertical component or the horizontal component of the ERP should be used, whichever is greater in the pertinent azimuthal direction.

(4) The antenna height to be used is the height of the radiation center above the average terrain along each pertinent radial, determined in accordance with §73.313(d) of this chapter.

(c) An application for a change (other than a change in channel) in the authorized facilities of an FM translator station will be accepted even though overlap of field strength contours would occur with another station in an area where such overlap does not already exist, if:

(1) The total area of overlap with that station would not be increased;

(2) The area of overlap with any other station would not increase;

(3) The area of overlap does not move significantly closer to the station receiving the overlap; and,

(4) No area of overlap would be created with any station with which the overlap does not now exist.

(d) The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.

(e) The provisions of this section will not apply to overlap between a proposed fill-in FM translator station and its primary station operating on a first, second or third adjacent channel, provided that such operation may not result in interference to the primary station within its principal community.

(f) An application for an FM translator station will not be accepted for filing even though the proposed operation would not involve overlap of field strength contours with any other station, as set forth in paragraph (a) of this section, if the predicted 1 mV/m field strength contour of the FM translator station will overlap a populated area already receiving a regularly used, off-the-air signal of any authorized co-channel, first, second or third adjacent channel broadcast station, including Class D (secondary) noncommercial educational FM stations and grant of the authorization will result in interference to the reception of such signal.

(g) An application for an FM translator or an FM booster station that is 53 or 54 channels removed from an FM radio broadcast station will not be accepted for filing if it fails to meet the required separation distances set out in §73.207 of this chapter. For purposes of determining compliance with §73.207 of this chapter, translator stations will be treated as Class A stations and booster stations will be treated the same as their FM radio broadcast station equivalents. FM radio broadcast station equivalents will be determined in accordance with §§73.210 and 73.211 of this chapter, based on the booster station's ERP and HAAT. Provided, however, that FM translator stations and booster stations operating with less than 100 watts ERP will be treated as class D stations and will not be subject to intermediate frequency separation requirements.

(h) An application for an FM translator station will not be accepted for filing if it specifies a location within 320 kilometers (approximately 199 miles) of either the Canadian or Mexican borders and it does not comply with §74.1235(d) of this part.

(i) FM booster stations shall be subject to the requirement that the signal of any first adjacent channel station must exceed the signal of the booster station by 6 dB at all points within the protected contour of any first adjacent channel station, except that in the case of FM stations on adjacent channels at spacings that do not meet the minimum distance separations specified in §73.207 of this chapter, the signal of any first adjacent channel station must exceed the signal of the booster by 6 dB at any point within the predicted interference free contour of the adjacent channel station.

(j) FM translator stations authorized prior to June 1, 1991 with facilities that do not comply with the predicted interference protection provisions of this section, may continue to operate, provided that operation is in conformance with §74.1203 regarding actual interference. Applications for major changes in FM translator stations must specify facilities that comply with provisions of this section.

[55 FR 50694, Dec. 10, 1990, as amended at 56 FR 56170, Nov. 1, 1991; 58 FR 42025, Aug. 6, 1993]

§74.1205 Protection of channel 6 TV broadcast stations.

The provisions of this section apply to all applications for construction permits for new or modified facilities for a noncommercial educational FM translator station on Channels 201-220, unless the application is accompanied by a written agreement between the NCE-FM translator applicant and each affected TV Channel 6 broadcast station licensee or permittee concurring with the proposed NCE-FM translator facility.

(a) An application for a construction permit for new or modified facilities for a noncommercial educational FM translator station operating on Channels 201-220 must include a showing that demonstrates compliance with paragraph (b), (c) or (d) of this section

9. The radio market of Victoria, Texas, ranks at the end of the list of radio markets, but is very media active with the following stations operating in the city, but, in some cases, licensed to another location:

FM Frequency (Mhz)	Call	Class	Power Height	Year Begin	Notes
88.5		D A (cp)	.05 KW 1.0	1993	Religious, American Family Radio*
89.3	KXBJ	C3	18 KW 300' (91M)	1993	Religious, contemporary music.*
90.1	KVRT	c2	40 KW 350' (107M)	1993	NPR*
91.5		A (3 applicants) C3 (1 applicant)			Religious
92.3	KVLT	A (cp)	3KW 6 kw	1991	Soft AC* local owner
93.3	KPLV	C1	100 KW 450' (137M)	1980	Country* Lic. Port Lavaca LMA w/KVIC
95.1	KVIC	C1	100 KW 500' (152M)	1976	AC*
98.7	KTXN	C1	100 KW 254' (77M)	1965	Hispanic* LMA w/KAVU(TV)
100.9	KEPG	A	3 KW 300' (91M)	1989	w KIXS Disco dance
104.7	KZAM	C2	50 KW	1997	Country lic. Ganado
106.9	KLUB	C3	25 KW	1991	old hits w/ KIXS Lic. Bloomington
107.9	KIXS	C1	100 KW	1980	country group owner-Capstar
other stations (FM) selling in area and serving variously area:					
95.9	KHMC	C3	25 KW	1992	lic. to Tejano, group ownr (Goliad)
97.7	KCVQ	C3	25 KW	1984	Oldies, group ownr (Cuero) sold w/ KZAM

10. Footnotes of previous page listing are as follows:

* ~~Satellite~~ delivered programming for majority, if not all, of

L M A = local marketing agreement providing that a bulk, if not all program time is brokered to another station. Stations with this arrangement in market are KPLV (to KVIC) and KTXN (to KAVU).

The market is served by two locally licensed fulltime AM stations--KVIC on 1340 kilohertz and KNAL on 1410 kilohertz. Save for listing for matter of record only these stations do not figure into the study of this comment. There have been no new AM radio stations licensed to Victoria since KNAL in 1949. The population is now estimated by the Department of Commerce at 61,000 in the city and 81,000 in Victoria County. There, however, have been two stations (AM) in the immediate adjacent counties that have been moved (KGUL at 1560 from Port Lavaca to Bellaire) or closed (KTXC at 1600 from Cuero) in the past two years. Two television stations licensed to Victoria serve the market: KAVU (ABC on channel 25) and KVCT (Fox on channel 19), there are several low power television stations: channel 43 (Trinity as a religious), channel 51, 53, and 55 (Telemundo), and channel 59 (KUNI owned by KAVU and operated from a separate site as an affiliate of Univision). There is also a daily newspaper The Victoria Advocate.

11. The two stations principally in this study are KVLTV and KTXN. The former is a class A with a construction permit for six (6) kilowatts and the latter a 100 kilowatt class C1. This comment and reply comment will show that "the licensing of low power FM stations in the city and area will severely reduce the coverage area of these two stations -- and any other FM stations in whose territory of 60 dbu contour these LPFM stations are placed. Commentator asks Commission to deny RM-9242 for this reason alone as found to be applicable to all likewise similarly situated stations and LPFM outlets.

FOOTNOTES

- * 1. 2 FCC Rcd. 6754, et. seq.
(1987) "Review of Technical and Operational Re-
quirements: Part 73-C Noncommercial Edu-
cational FM Broadcast Stations"
- * 2. 11 FCC Rcd.1997, et seq.
(1996) "ECI License Company, Inc. " In Re: KNRK,
Camas, WA, BPH-940829IC.
- * 3. 3 FCC Rcd.2478
(1988) "In the Matter of Review of Technical
Parameters for FM Allocation Rules of
Part 73, Subpart B, Broadcast Stations."
- * 4. 4 FCC. Rcd.3558, et. seq.
(1989) "In the Matter of Review of Technical
Parameters for FM Allocation Rules of
Subpart B, FM Broadcast Stations."
- * 5. 2 FCC Rcd. 5694, et. seq.
(1987) "In the Matter of Review of Technical
Parameters for FM Allocation Rules of
Part 73, Subpart B, FM Broadcast
Stations."
MM Docket 86-144
- * 6. 3 FCC. Rcd. 5762, et.seq.
(1988) "In the Matter of Review of Technical and
Operational Requirements Part 73-C Non-
commercial Educational FM Broadcast
Stations."
MM Docket 87-140
- 7. 5 FCC.Rcd. 7213. et.seq.
(1990) Translators for FM is covered in article.
- * 8. ¶74.1204 CFR 47,1997 ed.
(10-1-97 edition) "Protection of FM broadcast stations and
FM translators."
- 9. 6 FCC Rcd.3417. et.seq. FM class C3 is covered in article.
- 10. 70 FCC. 2d at 972,et.seq.
31 FR 14755-56 (1966) Minimum power for FM stations (educational)
is covered.
- 11. FCC Rcd.at 7245, et.seq.
(1996) Grandfathered Short Spaced FM Stations
is covered.
- 12. Referring to cited in text KJLH
attempts to upgrade service.
- * 13. Decision CRTC 97-539 "Radio 1540 Limited Toronto, Ontario-
Ottawa, (5 September 1997) 199616348. License amendment."
- * 14. Public Notice CRTC 1993-95 "A Licensing Policy for Low-Power Radio
Ottawa (28 June 1993) Broadcasting."
- * 15. IEEE Transactions on Broadcast- "Coverage and Interference for Second-Adja-
ting, Vol. BC-26, no.4. cent Channel FM Broadcast Stations,"
(continued on next page)

- * 15. IEEE Transaction on Broadcas- by Haakinson, Eldon J. and Adams, Jean E.
ting, Vol. BC-26, no.4. of the Institute for Telecommunication
(December 1980) Sciences, National Telecommunications and
Information Administration, Boulder, Colo-
rado, 80303.

- * 16. FCC 97-276 "In the Matter of Grandfathered Shortx
MM Docket 96-120 spaced FM Stations."
RM-7651
Report and Order (1997)
at 11840, et. seq.

- * 17. 3 FCC. Rcd. at 5941, et.seq. "In the Matter of Amendment of Part 73 of
MM Docket 88-375 the Rules to provide for an additional FM
RM-6236, RM-6237 station class (Class C3) and to increase
the maximum transmitting power for Class A
Stations."
Notice of Proposed Rule
Making (1988)

- * 18. 3 FCC Rcd. at 4859, et.seq. "In re Application of Ramapo Indian Hills
Regional High School District for Modi-
fication of Noncommercial Educational
Station WRRH(FM), Franklin Lakes, New
Jersey." File no. BPED-821013AD

- * addendum 18 Most Recent FM Channel Rulemakings and site
restriction considerations. Extracts from
FCC allocations branch of Mass Media Bureau.

- 19. see number 18.

- * 20. 6 FCC Rcd., at 418 et.seq. "In re Applications of Empire State Broad-
casting Corporation (WWKB), Buffalo, New
York. For Renewal of License. File No.
BR-840201WQ, and Bursam Communications Cor-
poration (WTHE), Mineola, New York. For a
Construction Permit. File No. BP-840430AC.

Those of the above numbered that are marked with * are included, in the
entirety in the addendum with the same number.

- 21. "FM Stations versus Low Power FM Stations
--Loss or Gain? Exhibits (1) to (17) are
included and show the existing coverage of
two Victoria, Texas stations KTXN and KVLIT
with proposed LPFM stations.

FM STATIONS VERSUS LOW POWER FM STATIONS -- LOSS OR GAIN?

ADDENDUM 21

1. Commentator will show in this 17 series of exhibits labeled E.R.C. - for Engineering Reply Comments that there will be a tremendous loss of coverage for both existing stations and proposed low power FM stations to be built on the second and third adjacent channels with powers from 1 watt to 3,000 watts and antenna heights from ground level to 328 feet (100 meters).

2. The criteria for interference are found in §74.1204 of the Code of Federal Regulations, Part 47, chapter 74, 1997 edition. These are used for protection to existing stations and protection to them from new stations both FM of all classes and translators for co-channel, first adjacent channel (± 200 kilohertz from the carrier frequency of the existing to be protected station), second adjacent channel (± 400 kilohertz from the station, and also third adjacent channel (± 600 kilohertz from the station. Where there is an invasion of the existing station 60 dbu (protected contour per §73.333 50,50 curves) by a new station the area in question is shown and tallied to amount of loss but not allocated as to existing or new station.

3. The two victim stations are located in Victoria, Texas. KTXN is a 100 kilowatt class C1, while KVLTV is a 6 kilowatt class A. The assumed transmitter sites are real locations with available antenna placement. The contours of 100, 80, 70, and 60 dbu level are shown, however all other pertinent contours are shown in the table one and can be matched with addendum number eight (8) which is a part of the Commission rules §74.1204 for required spacings according to contours. These contours are required for FM stations and translators.

INDEX OF EXHIBITS

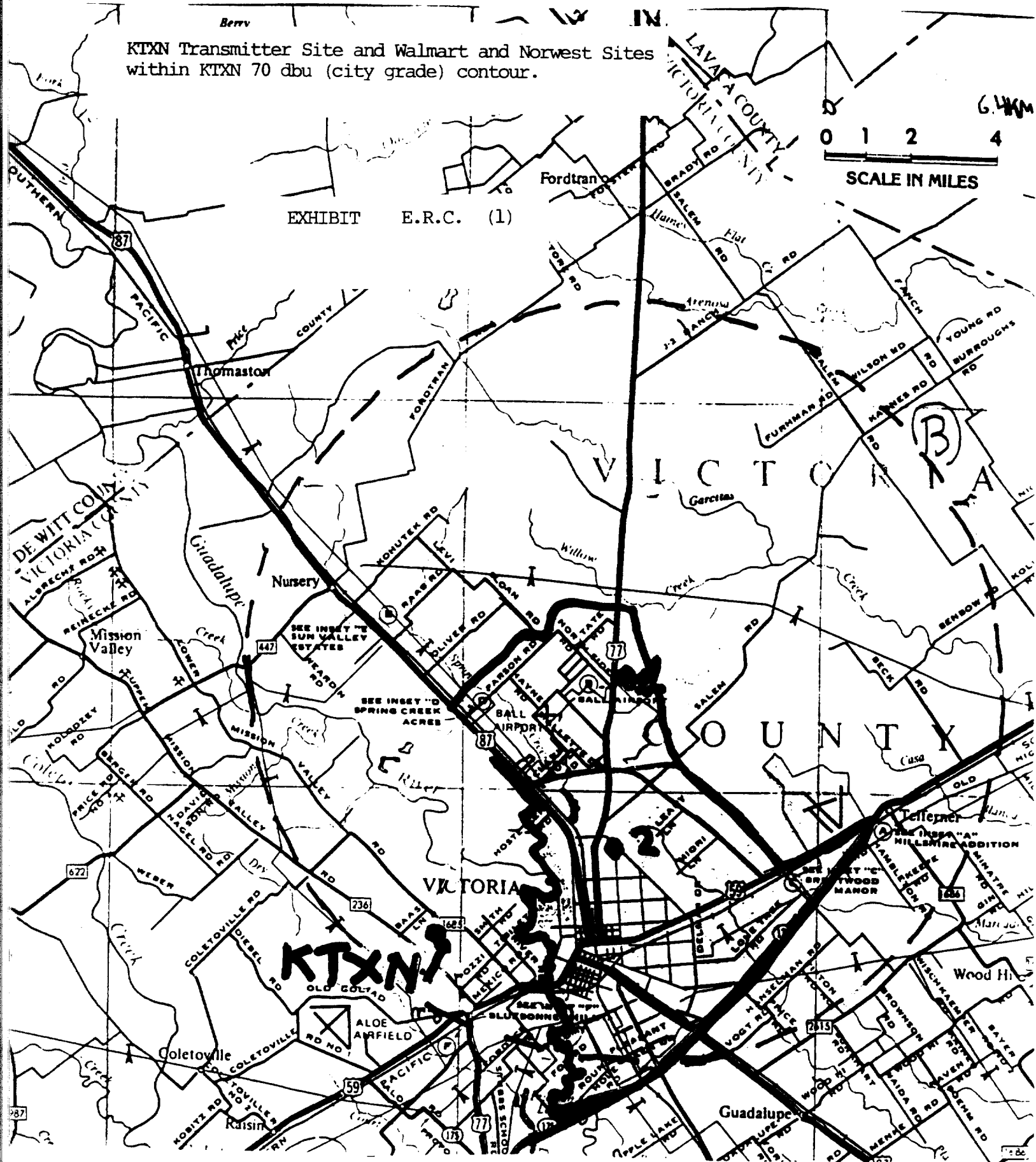
- E.R.C. (1) KTXN transmitter site with Walmart and Norwest sites along with Walmart 70 dbu coverage contour.
- E.R.C. (2) Walmart Impact (on KTXN).
- E.R.C. (3) KTXN transmitter site and Norwest site and its 100, 80, 70 and 60 dbu contours.
- E.R.C. (4) Norwest Impact (on KTXN).
- E.R.C. (5) Walmart operation and coverage contours of 100, 80, and 70 dbu as contained within the KTXN 70 dbu (city grade) contour.
- E.R.C. (6) Proposed Edna, Texas LPFM-1 3 KW 300' impace on KTXN 60 dbu.
- E.R.C. (7) Norwest alternative LPFM 100 watts and 100 feet (32M) coverage contours of 80, 70, and 60 dbu within KTXN 70 and 60 dbu contours.
- E.R.C. (8) KTXN 100 and 80 dbu contours as impacted by Walmart 100 and 80 dbu contours.
- E.R.C. (9) KTXN 100 and 80 dbu contours as impacted by Norwest 100 and 80 dbu contours with 1,000 watts at 150 feet.
- E.R.C. (10) KTXN contours of 70 and 60 dbu (protected).
- E.R.C. (11) KVLTV city of Victoria coverage and 70 and 60 dbu contours with proposed LPFM sites at Walmart and Norwest Bank.
- E.R.C. (12) KVLTV victim station interference from Norwest proposal. (600 KHZ).
- E.R.C. (13) KVLTV victim station interference from Norwest at 400 KHZ.
- E.R.C. (14) KVLTV victim station intereference from Norwest at 600 KHZ with all contours of Norwest shown.
- E.R.C. (15) KVLTV victim station and areas of interference within its 60 dbu protected contour from Walmart at \pm 400 KHZ.
- E.R.C. (16) KVLTV victim station and areas of interference withing its 60 dbu contour from Walmart at \pm 600 khz.
- E.R.C. (17) Summary of exhibits (1) to (16).

Recommendations

KTXN Transmitter Site and Walmart and Norwest Sites
within KTXN 70 dbu (city grade) contour.

EXHIBIT E.R.C. (1)

0 1 2 4
SCALE IN MILES



A	B	3 KW	328' (100 m)	#1 WALMART	7.3 MI	35°T
60	70	11 KW	152' (46 m)	#2 NORWEST	11.7 KM	65°T
DBU	DBU				4.7 MI	
					7.1 MI	

WALMART IMPACT

EXHIBIT E.R.C. (2)

4.8KM
3Mi

3KW 328' (100M)

LOCATED 7.3Mi 35°T
11.7KM

A

B

C

D

K_T
x_N

35°T

D 70DBU
C 60DBU

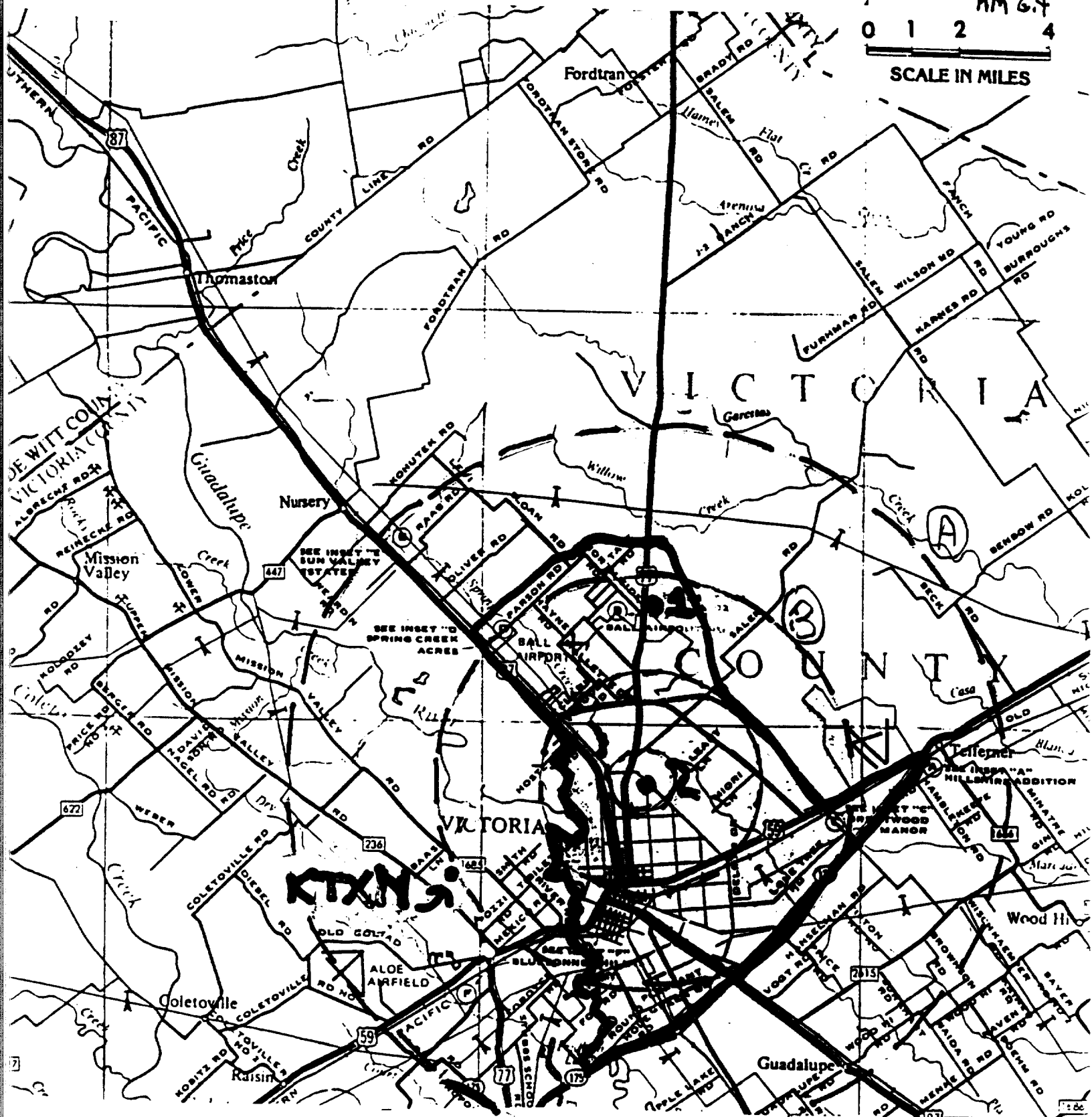
K_Tx_N 60DBU
1530 mi²
3963 KM²

AREA LOST
445 mi²
1153 KM²

2970

EXHIBIT E.R.C. (3)

KTXN Transmitter Site and Norwest site and its 100, 80, and 70 dbu contours



3 KW 328' (100 M)

#1 WALMART 7.3 mi

35°T

66 DBU 70 DBU 1 KW 150' (46 M)

#2 NORWEST

11.7 KM
4.7 mi

65°T

NORWEST IMPACT

UN-GRAPHED

4.8 KM
3 Mi

1 KW 150' 46M

100 W 100' 36M

C 60 DBU
D 70 DBU

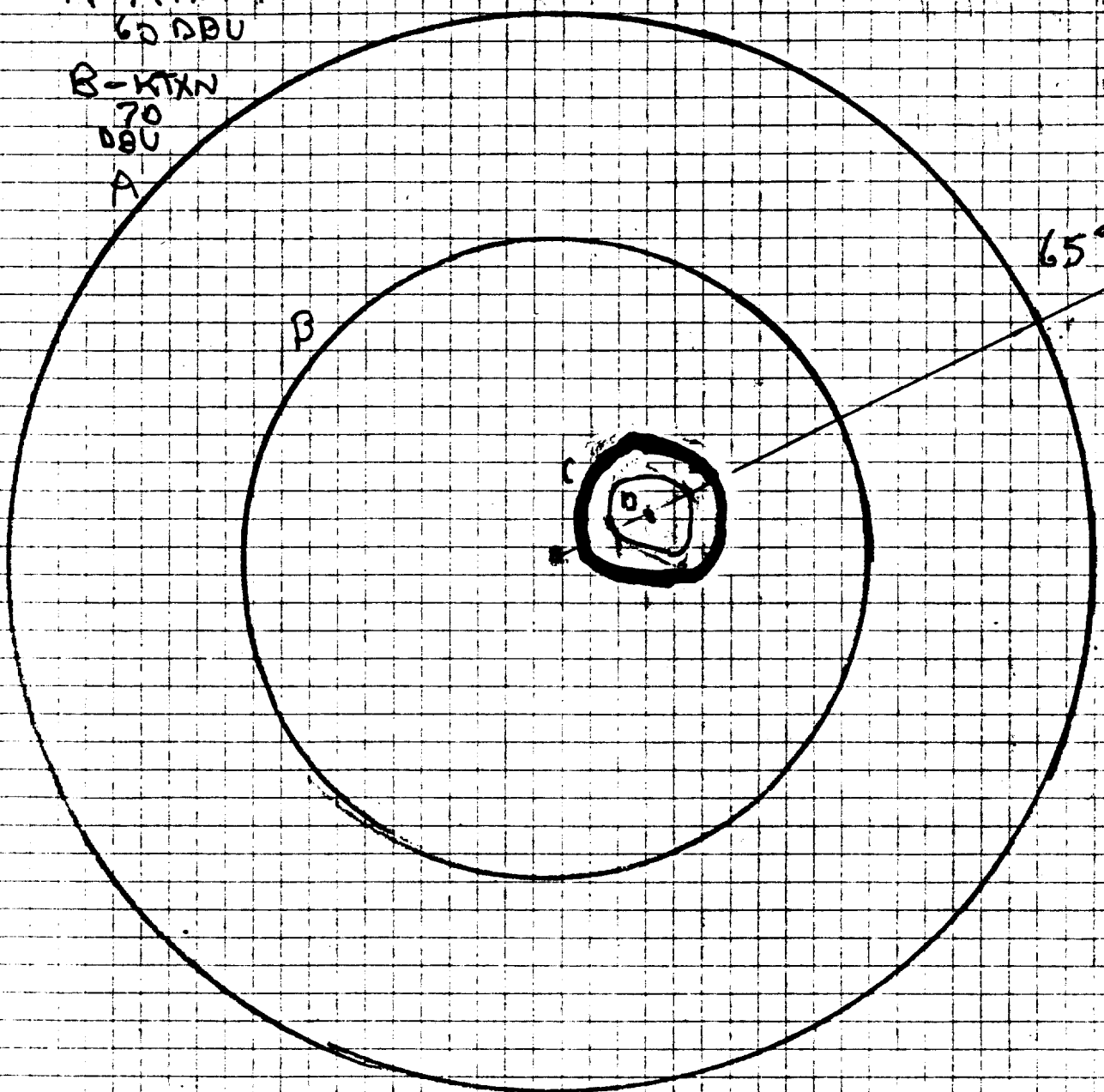
A-KTXN
60 DBU

B-KTXN
70 DBU

A

B

65°T



KTXN 60 DBU
636 KM²

1 KW 150' (46M)
LOSS TO KTXN
830 KM²

13,7 70

636 KM²

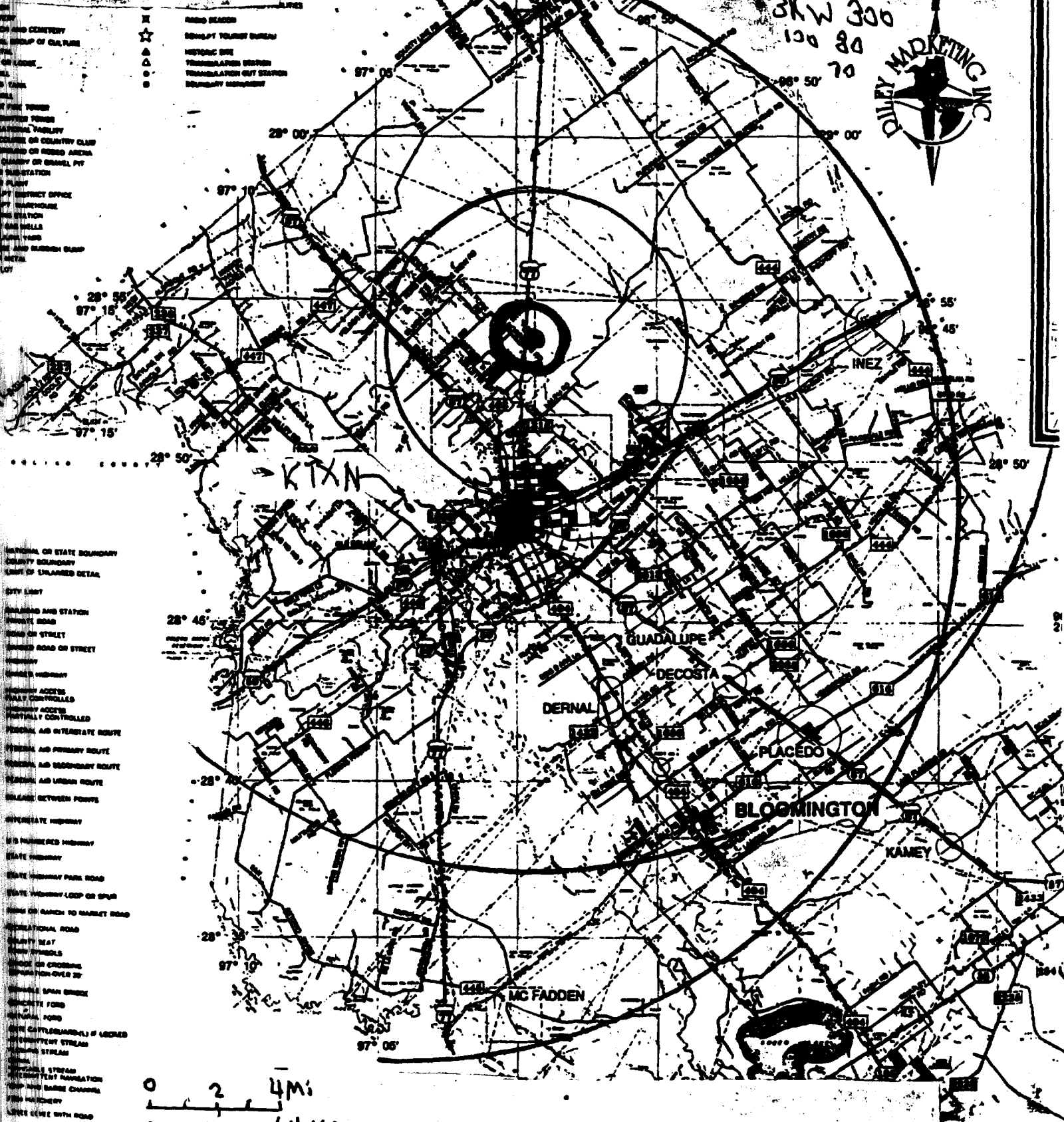
1 KW 100' (30 M)
340 KM²

5.3 70

REPRODUCTION OF THIS PUBLICATION IN ANY MANNER OTHER THAN IN
WHOLE OR IN PART IS STRICTLY PROHIBITED. ALL RIGHTS RESERVED.
COPYRIGHT © 1981 MARSHALLS INC. IF QUOTED OR CARRIED ARE
NOTED, PLEASE WRITE: MARSHALLS 501 E. CAMPBELL
SPRINGFIELD, MASSACHUSETTS 01103, OR PHONE: 1-800-898-1700,
FAX NO. 1-417-852-8800

KTXN
70 DBU

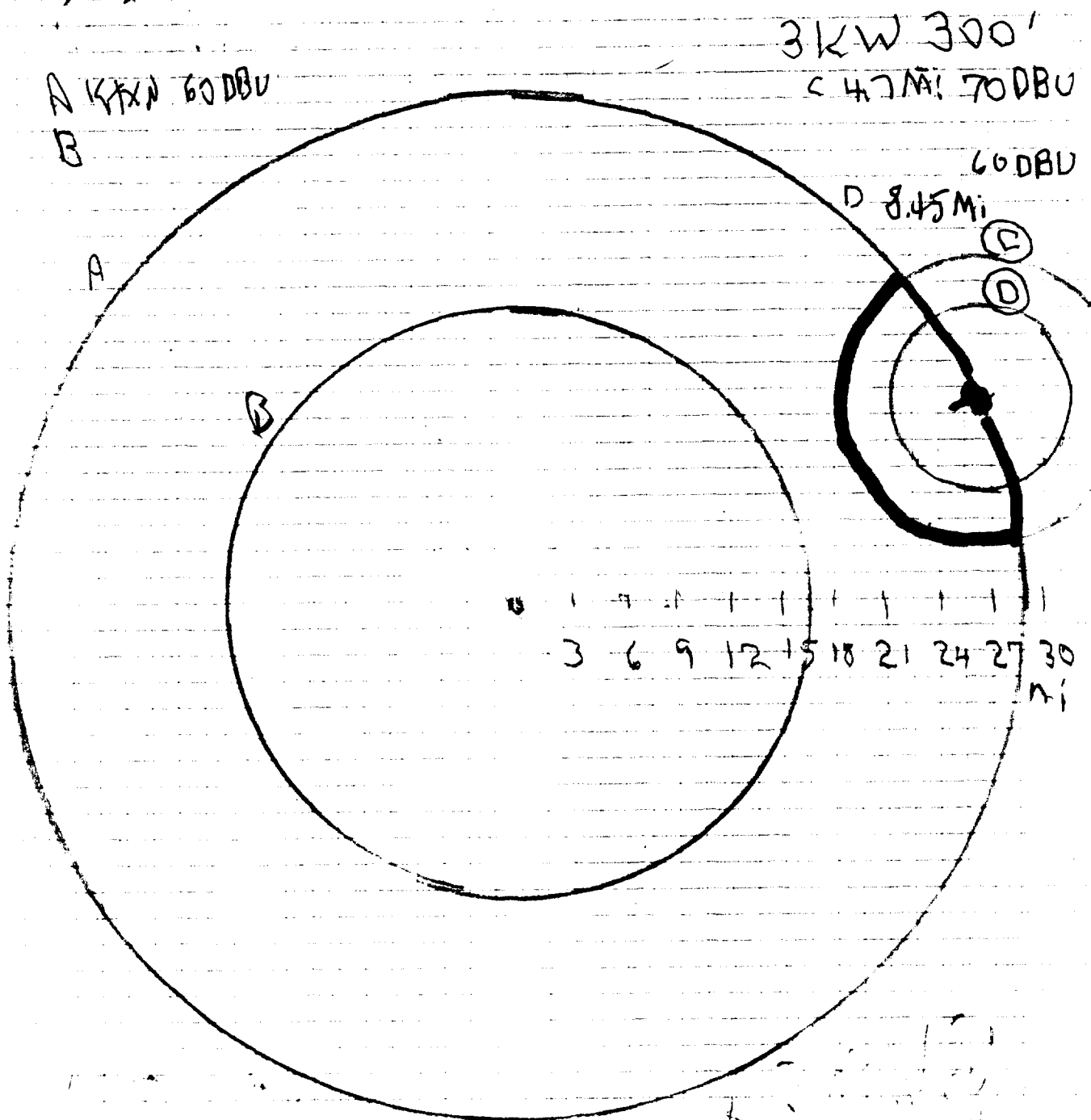
3KW 300
100 80
70



Walmart operation and coverage contours of 100, 80, 70 and 60 dbu.

EXHIBIT E.R.C. (6)

Proposed Edna, Texas, LPFM at 28 Mi (45 km)
at bearing of 65° true. and impact on KTXN
60 dbu contour.



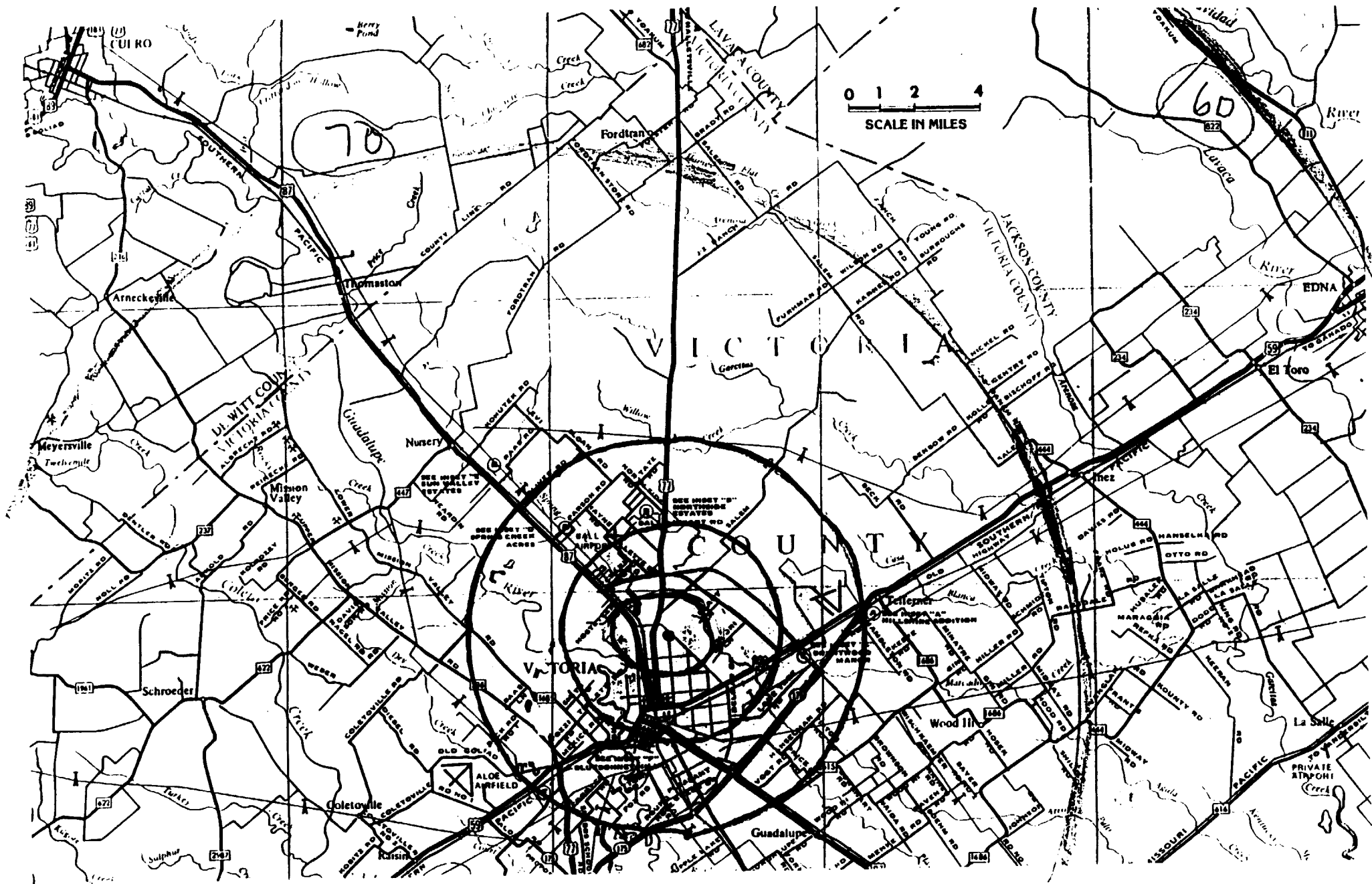
KTXN 60 DBU
2457 mi.²
6368 km²

LOSS TO KTXN
35% - mi.²
1527 km²

LOSS TO EDNA
50%

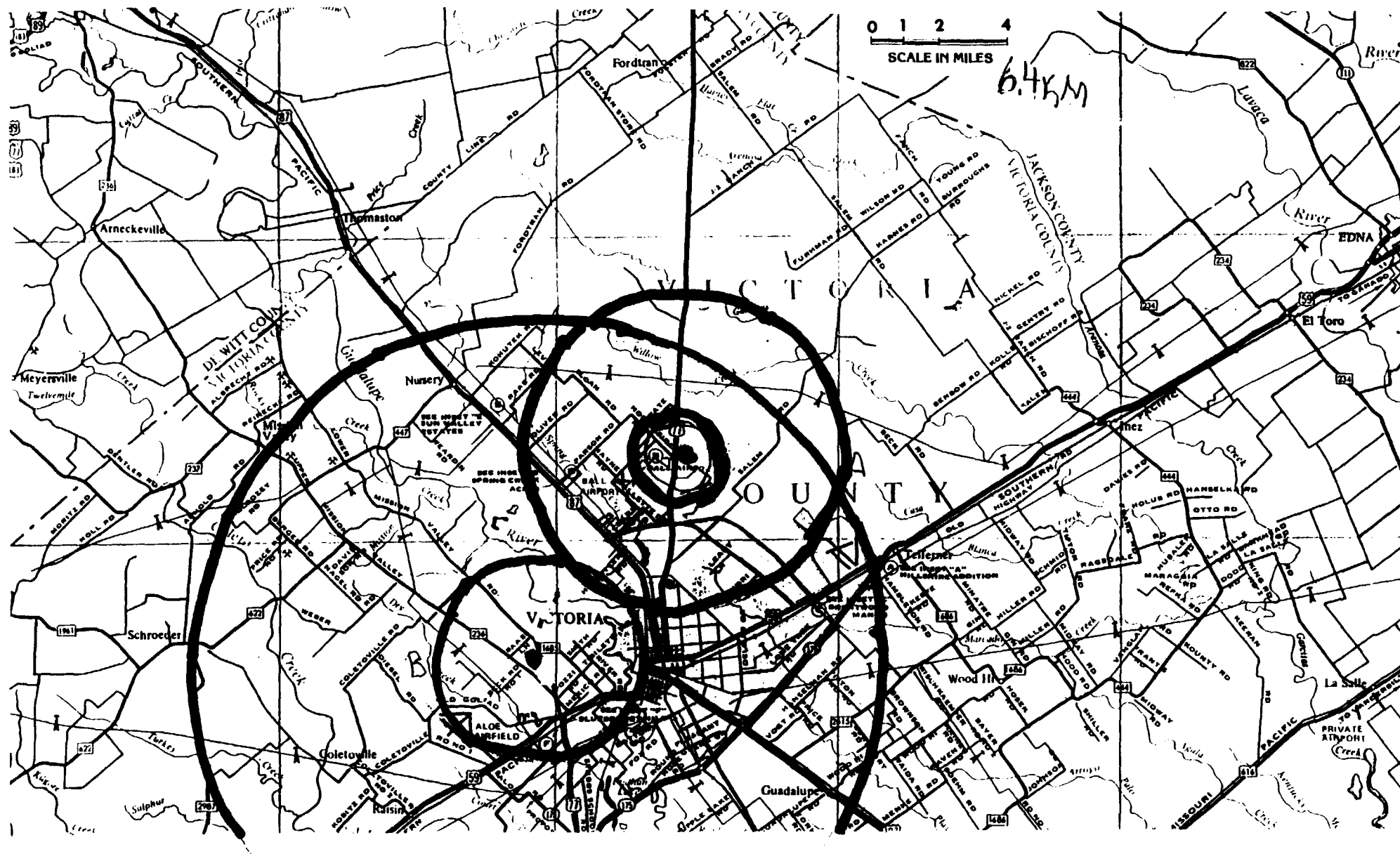
EXHIBIT E.R.C. (7)

Norwest alternative LPFM 100 watts at 100 feet (32M) coverage contours of 80, 70, and 60 dbu within KTXN 70 and 60 dbu contours.



KTXN
 B 100 3.1 5KM VS WALMART 100 135 D 2.2
 A 80 9.3 15KM 80 4.7 C 7.6

EXHIBIT E.R.C. (8) KTXN 100 and 80 dbu contours as impacted by Walmart 100 and 80 dbu contours.



KTXN

B 100 DBU 3.1M; 5KM

A 80 " 9.3M; 15KM

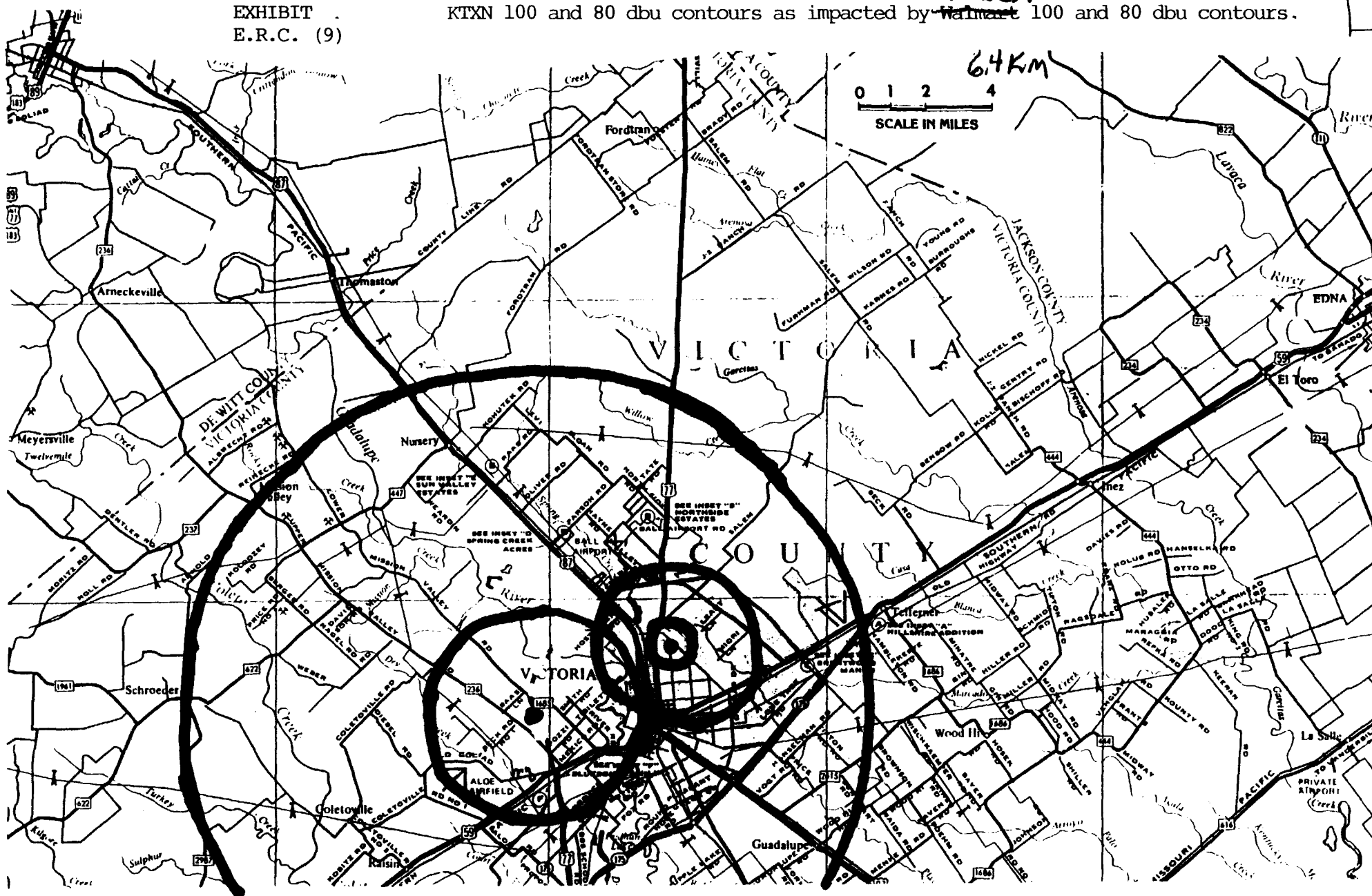
NORWEST C 100 DBU 1.15KM .7M;

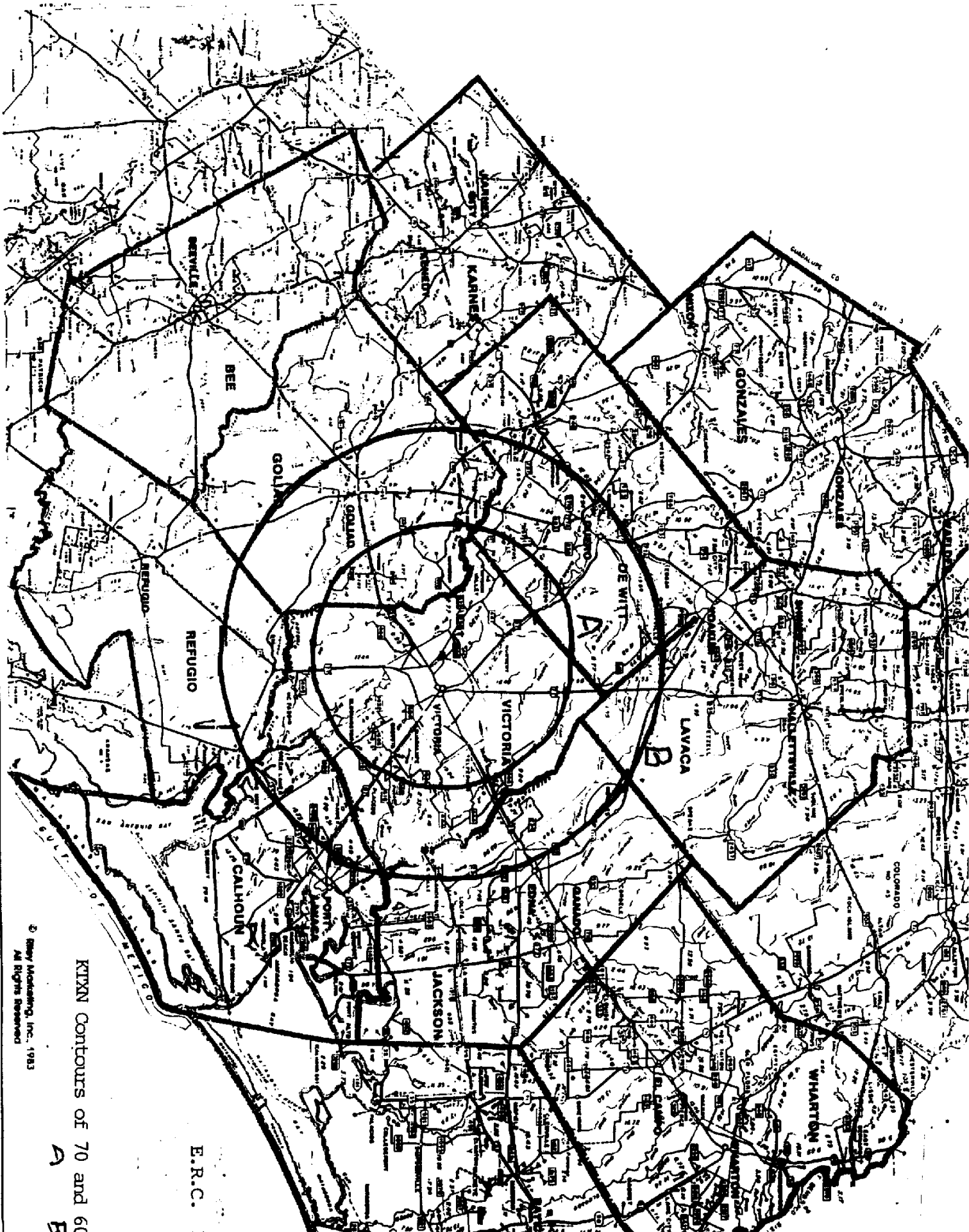
D 80 " 3.8 2.4

NORWEST

EXHIBIT
E.R.C. (9)

KTXN 100 and 80 dbu contours as impacted by ~~station~~ 100 and 80 dbu contours.





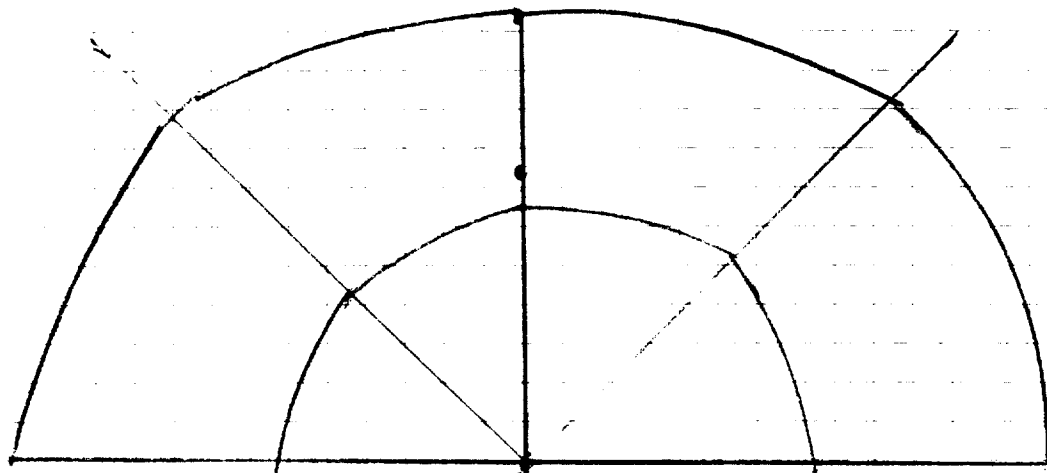
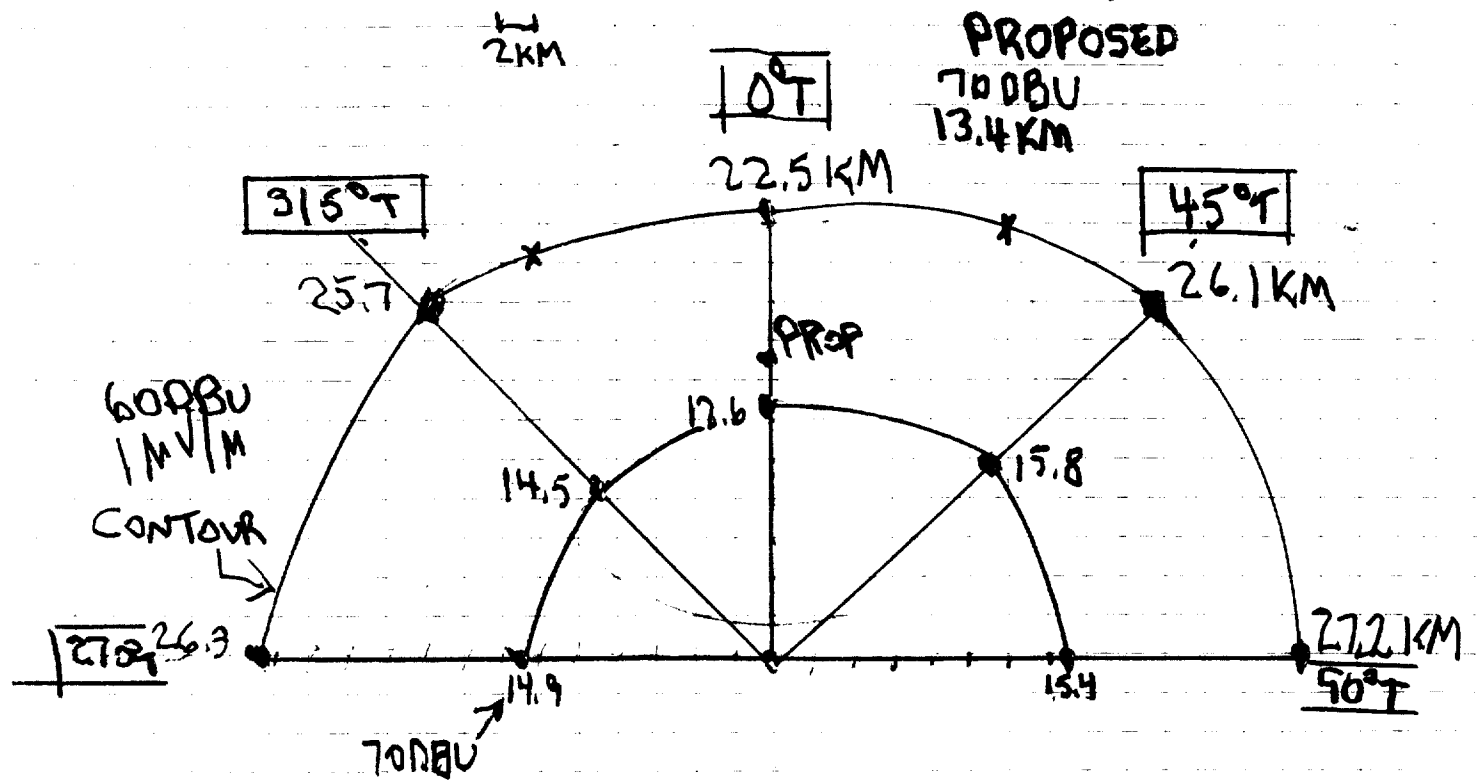
KIXN Contours of 70 and 60

A

B

E.R.C.

KVLT 92.3 MHz 6KW/DA



USING 74,1204 CF:TERIA

15.2 km

9.45 m

top : 3KW 700' +2 CHNLS 400 KHZ

10.5 km

position

+3 CHNLS 600 KHZ

KVLT city of Victoria coverage and 70 and 60 dbu contours with proposed LPFM sites at Walmart and Norwest Bank.



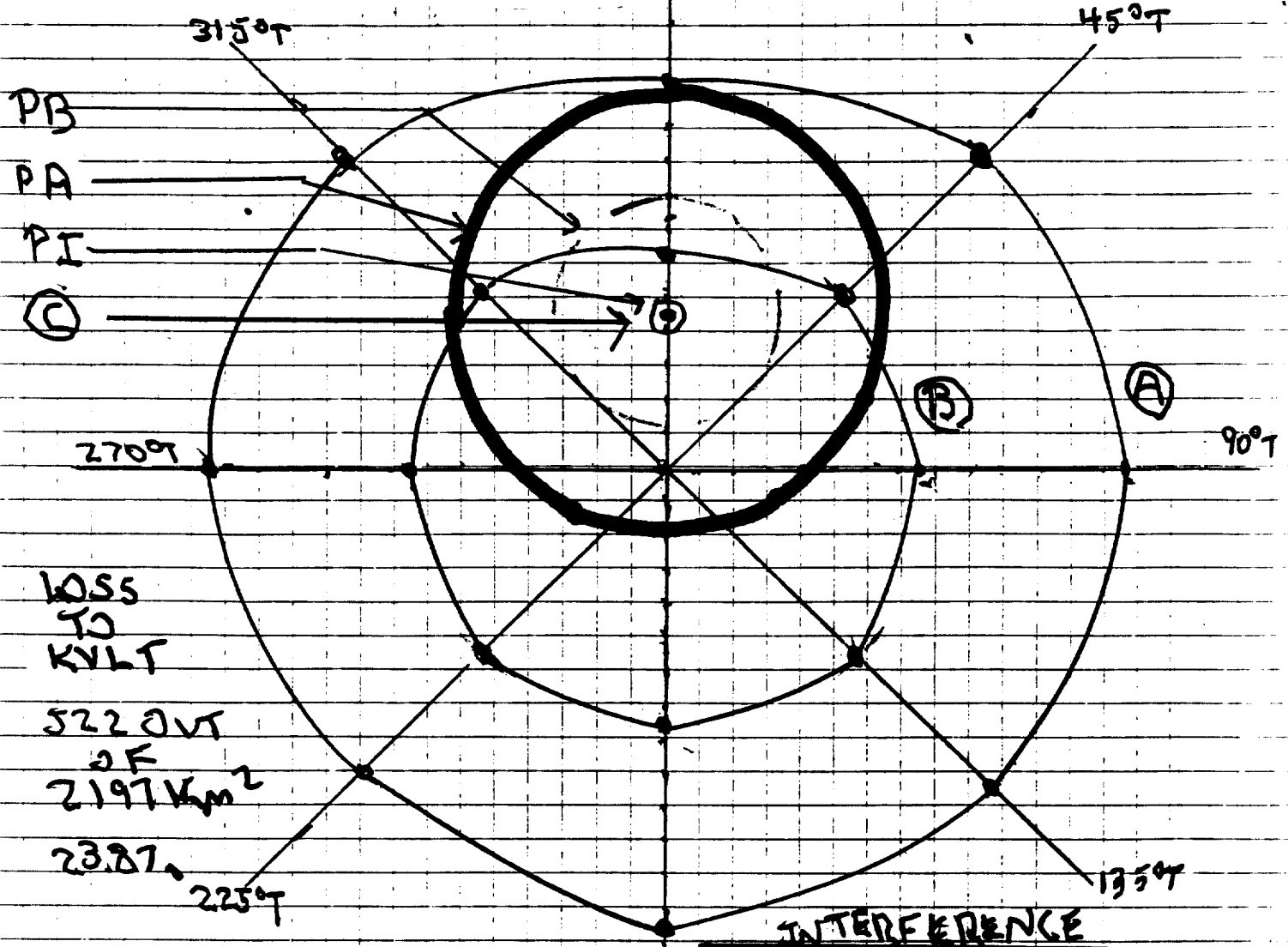
2) SAM HOUSTON SITE
AND LAURENT

A = KVL T CO DBU
B = KVL T 70 DBU
— 2 KM

0° T KVL T VICTORI
TEXAS

EXHIBIT (12)

KVL T victim station interference from
Norwest proposed station. ± 600 kHz.



TOTAL 60 DBU PROPOSED

1000 T CONTOUR IS WITHIN
KVL T 60 DBU PROTECTED.

③ SAM HOUSTON - LAURENT (NORWEST BANK)

± 600 KHZ

545 M, 8.8 KM θ T

PB : 70 DBU 7 KM

LPFM - 1 1 KW 52 M

PA : 60 DBU 12.9 KM

522 KM²

PI : 100 DBU 1.15 KM

1 MV/M